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EXAMINER	
DANIEL JR, WILLIE J	

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/099,723	UHLIK, CHRISTOPHER R.	
	Examiner	Art Unit	
	Willie J. Daniel, Jr.	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13,15-28,30-43 and 45-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-13,15-28,30-43 and 45-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's RCE amendment filed on 25 July 2005. **Claims 1, 3-13, 15-28, 30-43,** and **45-61** are now pending in the present application.

Drawings

2. The objections to the drawings are withdrawn, as the proposed drawing corrections are approved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-13, 15-28, 30-40, 42-43, 45-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hamano et al.** (hereinafter Hamano) (**US 5,604,928**) in view of **Shimizu** (**US 6,894,982 B1**).

Regarding **Claim 1**, Hamano discloses a method:

determining a start of reception of radio signals by a radio transmit-receive unit (3) which reads on the claimed "radio" (see col. 4, lines 57-62; col. 5, lines 13-16; Fig. 2 "ref. 2") based on predicting a start time of an assigned channel which reads on the claimed "time slot" of a repeating frame assigned to the radio (3) (see col. 5, lines 14-19,61-67; Figs. 2 "ref. 2, 7", 3 "ref. 2"), where the unit (3) is provided a channel;

generating a reset signal (10, 226) which reads on the claimed "radio active signal" (see col. 5, lines 13-16,55-56; col. 9, lines 52-53; Figs. 2 "ref. 10", 7 "ref. 226"), where the system generates signals for operating of the sub-CPU (2);

transmitting the radio active signal (10) to a coupled sub-CPU(2) which reads on the claimed "computer" to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 13-16,27-47,55-56; col. 6, lines 43-48; col. 9, lines 52-53; Figs. 2 "ref. 10", 7 "ref. 226");

determining an end of reception of radio signals by the radio based on predicting an end time of the time slot assigned to the radio (see col. 6, lines 11; col. 16, lines 26-30; Fig. 2 "ref. 9");

generating a radio not active signal (226) based on the predicting time slot end time (see col. 5, lines 23-27; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 2 "ref. 10", 6 "ref. 6", 7 "ref. 226"), where the system releases the sub-CPU via a signal sent over the control or reset line (10, 226); and

transmitting the radio not active signal (226) to the coupled computer (2) to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 23-31; Figs. 2 "ref. 10", 6 "ref. 6", 7 "ref. 226"), where the system releases the sub-CPU via a signal sent over the control or reset line (10, 226). Hamano fails to disclose having the feature repeating TDMA frame assigned to the radio. However, the examiner maintains that the feature repeating TDMA frame assigned to the radio was well known in the art, as taught by Shimizu.

In the same field of endeavor, Shimizu discloses the feature repeating TDMA frame assigned to the radio (see col. 3, lines 20-27; col. 2, lines 55-60; abstract; Figs. 1-2, 5A-B), where the mobile unit is provided an assigned TDMA slot that determines the start and end of communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Shimizu to have the feature repeating TDMA frame assigned to the radio, in order to provide a wireless communication terminal that can efficiently prevent noises against a wireless receiving section, as taught by Shimizu (see col. 1, lines 46-47).

Regarding **Claim 3**, Hamano discloses the method of Claim 1, wherein predicting the start time comprises predicting the start time using a oscillation circuit (14) which reads on the claimed "timing reference" of the radio (3) (see col. 4, lines 50-56; col. 5, lines 14-19; Figs. 1, 7, 15).

Regarding **Claim 4**, Hamano discloses the method of Claim 1, wherein the assigned time slot is a receive time slot (channel) assigned to the coupled computer (2) and wherein predicting the start time comprises predicting the start time using the coupled computer's clock as a timing reference (14) (see col. 4, lines 50-56; col. 5, lines 14-19; col. 5, line 61 - col. 6, line 3; Fig. 2).

Regarding **Claim 5**, Hamano discloses the method of Claim 1, wherein transmitting the radio active signal comprises asserting a state on a reset or control line (10, 210) which reads on the claimed "connector" between the radio (3) and the coupled computer (2) (see

col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1, 7), where the signal sent via the reset line.

Regarding **Claim 6**, Hamano discloses the method of Claim 5, wherein transmitting the radio not active signal comprises de-asserting the state on a connector (10, 210) between the radio (3) and the coupled computer (2) (see col. 5, lines 23-27,55-56; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; col. 10, lines 18-19; Figs. 2, 7), where the signal sent via the reset line.

Regarding **Claim 7**, Hamano discloses the method of Claim 1, wherein transmitting the radio active signal comprises sending an instruction over a reset (control) line (8,10, 210, 226) which reads on the claimed "high speed system bus" to the coupled computer (2) (see col. 4, lines 41-42; col. 5, line 14-15,55-56; Figs. 1, 7), where the sub-CPU is instructed to the rest state.

Regarding **Claim 8**, Hamano discloses the method of Claim 7, wherein sending an instruction comprises sending an reset signal (10) which reads on the claimed "interrupt signal" to CPU operating software (2) of the coupled computer (2) (see col. 4, lines 41-47; col. col. 5, lines 14-15,55-56; Figs. 2).

Regarding **Claim 9**, Hamano discloses the method of Claim 7, wherein sending an instruction comprises sending an instruction to a power supply monitor IC (6) which reads on the claimed "power management module" of the coupled computer (2) (see col. 5, lines 1-6,32-34; Fig. 1 "ref. 1").

Regarding **Claim 10**, Hamano discloses the method of Claim 1, wherein transmitting the radio not active signal comprises sending a hardware interrupt to wake the CPU (2) of the

coupled computer (2) (see col. 5, lines 23-25; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 1, 3 "ref. 6", 7).

Regarding **Claim 11**, Hamano discloses the method of Claim 1, wherein the radio active signal and the radio not active signal comprise a reset signal (10, 210) which reads on the claimed "single signal" indicating the start time and the duration of the radio reception (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 "ref. 2 and ref. 9", 3, 9).

Regarding **Claim 12**, Hamano discloses the method of Claim 1, wherein determining the end of reception comprises predicting the end of reception based on the start time and the expected duration of reception (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 "ref. 2 and ref. 9", 3, 9).

Regarding **Claim 13**, Hamano discloses a machine-readable medium (e.g. memory) having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations (see col. 4, lines 33-50; Fig. 1) the comprising:

determining a start of reception of radio signals by a radio transmit-receive unit (3) which reads on the claimed "radio" (see col. 4, lines 57-62; col. 5, lines 13-16; Fig. 2 "ref. 2") based on predicting a start time of an assigned channel which reads on the claimed "time slot" of a repeating frame assigned to the radio (3) (see col. 5, lines 14-19,61-67; Figs. 2 "ref. 2, 7", 3 "ref. 2"), where the unit (3) is provided a channel;

generating a reset signal (10, 226) which reads on the claimed "radio active signal" (see col. 5, lines 13-16,55-56; col. 9, lines 52-53; Figs. 2 "ref. 10", 7 "ref. 226"), where the system generates signals for operating of the sub-CPU (2);

transmitting the radio active signal (10) to a coupled sub-CPU(2) which reads on the claimed "computer" to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 13-16,27-47,55-56; col. 6, lines 43-48; col. 9, lines 52-53; Figs. 2 "ref. 10", 7 "ref. 226");

determining an end of reception of radio signals by the radio based on predicting an end time of the time slot assigned to the radio (see col. 6, lines 11; col. 16, lines 26-30; Fig. 2 "ref. 9");

generating a radio not active signal (226) based on the predicting time slot end time (see col. 5, lines 23-27; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 2 "ref. 10", 6 "ref. 6", 7 "ref. 226"), where the system releases the sub-CPU via a signal sent over the control or reset line (10, 226); and

transmitting the radio not active signal (226) to the coupled computer (2) to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 23-31; Figs. 2 "ref. 10", 6 "ref. 6", 7 "ref. 226"), where the system releases the sub-CPU via a signal sent over the control or reset line (10, 226). Hamano fails to disclose having the feature repeating TDMA frame assigned to the radio. However, the examiner maintains that the feature repeating TDMA frame assigned to the radio was well known in the art, as taught by Shimizu.

Shimizu further discloses the feature repeating TDMA frame assigned to the radio (see col. 3, lines 20-27; col. 2, lines 55-60; abstract; Figs. 1-2, 5A-B), where the mobile unit is provided an assigned TDMA slot that determines the start and end of communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Shimizu to have the feature repeating TDMA frame assigned to the radio, in order to provide a wireless communication terminal that can efficiently prevent noises against a wireless receiving section, as taught by Shimizu (see col. 1, lines 46-47).the claim is rejected for the same reasons as set forth above in the rejection of claim 1.

Regarding **Claim 15**, the claim is rejected for the same reasons as set forth above in the rejection of claim 3.

Regarding **Claim 16**, the claim is rejected for the same reasons as set forth above in the rejection of claim 7.

Regarding **Claims 17** and **25**, the claims are rejected for the same reasons as set forth above in the rejection of claim 9.

Regarding **Claims 18** and **26**, the claim is rejected for the same reasons as set forth above in the rejection of claim 11.

Regarding **Claim 19**, the claim is rejected for the same reasons as set forth above in the rejection of claim 12.

Regarding **Claim 20**, Hamano discloses a portable electronic device which reads on the claimed "radio" (see col. 4, lines 30-33; col. 9, lines 1-3; Figs. 1, 7, 15) comprising:

a radio transmit-receive unit (3) which reads on the claimed "receiver" (see Fig. 1);

a computer unit (1) which reads on the claimed "processor" to determine a start of reception of radio signals by the receiver (3) based on predicting a start time of an assigned channel which reads on the claimed "time slot" of a repeating frame assigned to the radio (3)

(see col. 5, lines 14-31,61-67; Figs. 1, 2 "ref. 2, 7", 3 "ref. 2", 7-9), where the unit (3) is provided a channel and generate a radio active signal based on the predicted time slot start time and to determine an end of reception of radio signals by the receiver (3) and generate a radio not active signal based on the predicted time slot end time (see col. 5, lines 14-31; Figs. 1-3, 7-9), where the portable electronic device can detect the start and end of radio communication; and

an reset line (8, 10) which reads on the claimed "external interface" to transmit the radio active signal and the radio not active signal to a coupled computer (2) to affect the radio interference generated by the coupled computer (2) (see col. 5, lines 14-31,55-56; col. 4, lines 41-42; Figs. 1-3, 7-9), where the computer unit communicates with the sub-CPU via the reset line (10) or the control line (8). Hamano fails to disclose having the feature repeating TDMA frame assigned to the radio. However, the examiner maintains that the feature repeating TDMA frame assigned to the radio was well known in the art, as taught by Shimizu.

Shimizu further discloses the feature repeating TDMA frame assigned to the radio (see col. 3, lines 20-27; col. 2, lines 55-60; abstract; Figs. 1-2, 5A-B), where the mobile unit is provided an assigned TDMA slot that determines the start and end of communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Shimizu to have the feature repeating TDMA frame assigned to the radio, in order to provide a wireless communication terminal that can efficiently prevent noises against a wireless receiving section, as taught by Shimizu (see col. 1, lines 46-47).

Regarding **Claim 21**, Hamano discloses the radio of Claim 20, further comprising a timing reference (14) coupled to the processor (1) for use in determining the start of reception and the end of reception by prediction (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 "ref. 2 and ref. 9", 3, 8-9).

Regarding **Claim 22**, Hamano discloses the radio of Claim 20, further comprising a connector (10) between the radio (3) and the coupled computer coupled to the external interface (10) and wherein the external interface (10) transmits the radio active signal (reset signal - 10) by asserting a state on the connector (10) (see col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1, 7).

Regarding **Claim 23**, the claim is rejected for the same reasons as set forth above in the rejection of claim 6.

Regarding **Claim 24**, the claim is rejected for the same reasons as set forth above in the rejection of claim 8.

Regarding **Claim 27**, Hamano discloses a method comprising:

receiving a radio active signal at a computer (2) having a CPU (2) from a coupled radio (3), the radio active signal indicating a start of reception of radio signals by the coupled radio (3) based on predicting a start time of an assigned channel which reads on the claimed "time slot" of a repeating frame assigned to the radio (3) (see col. 5, lines 13-19,23-31,55-56, 61-67; Figs. 1, 2 "ref. 2, 7", 3 "ref. 2"), where a communication processing request from the radio transmit-receive unit occurs in the portable electronic device in which the unit (3) is provided a channel;

adjusting system operating parameters of the computer (2) to reduce interference with the radio (3) (see col. 5, lines 13-19,32-47; Fig. 1);

receiving a radio not active signal at the computer (2) from the coupled radio (3), the radio not active signal indicating an end of reception of radio signals by the radio (3) based on predicting an end time of the time slot assigned to the radio (see col. 5, lines 23-31; col. 9, line 65 - col. 10, line 4; Fig. 2 "ref. 9"), where the control means (1) switches the sub-CPU (2) from rest to active; and

readjusting the system operating parameters of the computer for operation without regard to interference with the radio (3) (see col. 5, lines 23-27; col. 9, line 65 - col. 10, line 4), where the sub-CPU is released to active state. Hamano fails to disclose having the feature repeating TDMA frame assigned to the radio. However, the examiner maintains that the feature repeating TDMA frame assigned to the radio was well known in the art, as taught by Shimizu.

Shimizu further discloses the feature repeating TDMA frame assigned to the radio (see col. 3, lines 20-27; col. 2, lines 55-60; abstract; Figs. 1-2, 5A-B), where the mobile unit is provided an assigned TDMA slot that determines the start and end of communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Shimizu to have the feature repeating TDMA frame assigned to the radio, in order to provide a wireless communication terminal that can efficiently prevent noises against a wireless receiving section, as taught by Shimizu (see col. 1, lines 46-47).

Regarding **Claim 28**, Hamano discloses the method of Claim 27, further comprising polling the coupled radio (3) for a radio active signal before receiving the radio active signal (see col. 5, lines 56-58; Fig. 2 "ref. 2").

Regarding **Claim 30**, Hamano discloses the method of Claim 27, wherein the assigned time slot (channel) is a receive time slot and wherein predicting the start time comprises predicting the start time using the computer's clock as a timing reference (14) (see col. 4, lines 50-56; col. 5, lines 14-19; col. 5, line 61 - col. 6, line 3; Figs. 1-3, 7-9).

Regarding **Claim 31**, Hamano discloses the method of Claim 27, wherein receiving the reset signal (10) which reads on the claimed "radio active signal" comprises detecting the assertion of a state on a connector (10, 210) between the radio (3) and the computer (2) (see col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding **Claim 32**, Hamano discloses the method of Claim 31, wherein receiving the release signal which reads on the claimed "radio not active signal" comprises detecting the de-assertion of the state on the connector (8, 10) between the radio (3) and the computer (2) (see col. 5, lines 23-27,55-56; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; col. 10, lines 18-19; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding **Claim 33**, Hamano discloses the method of Claim 27, wherein receiving the reset signal (10) which reads on the claimed "radio active signal" comprises receiving an instruction over a reset (control) line (8,10, 210, 226) which reads on the claimed "communications bus" coupled to the coupled radio (3) (see col. 4, lines 41-42; col. 5, line 14-15,55-56; Figs. 1-3, 7-9), where the sub-CPU is instructed to the rest state.

Regarding **Claim 34**, Hamano discloses the method of Claim 33, wherein receiving an instruction comprises receiving a reset signal (10) which reads on the claimed "interrupt signal" to CPU operating software (2) of the computer (2) (see col. 4, lines 41-47; col. col. 5, lines 14-15,55-56; Figs. 2, 8).

Regarding **Claim 35**, Hamano discloses the method of Claim 33, wherein receiving an instruction comprises receiving an instruction to a power supply monitor IC (6) which reads on the claimed "power management module" of the computer (2) (see col. 5, lines 1-6,32-34; col. 9, lines 40-46; Fig. 1 "ref. 1", 7, 15).

Regarding **Claim 36**, Hamano discloses the method of Claim 27, wherein receiving the radio not active signal comprises receiving a hardware interrupt to wake the CPU (2) of the computer (2) (see col. 5, lines 23-25; col. 9, lines 52-53; col. 9, line 65 - col. 10, line 4; Figs. 1, 3 "ref. 6", 7, 9 "ref. 6", 15, 17 "ref. 6").

Regarding **Claim 37**, Hamano discloses the method of Claim 27, wherein the radio active signal and the radio not active signal comprise a single signal (10) indicating the start time and the duration of the radio reception (see col. 5, lines 13-26; col. 6, lines 23-28; col. 9, line 51 - col. 10, line 4; Fig. 2 "ref. 2 and ref. 9", 3, 9).

Regarding **Claim 38**, Hamano discloses the method of Claim 27, wherein adjusting the sub-CPU (2) which reads on the claimed "system" operating parameters comprises reducing the system (2) clock rate (see col. 5, lines 14-16; Figs. 1, 7, 15), where the sub-CPU is set to rest state in which the reducing the clock rate would be inherent.

Regarding **Claim 39**, Hamano discloses the method of Claim 27, wherein adjusting the system (2) operating parameters comprises turning off a CPU clock of the computer (2)

(see col. 5, lines 32-39; Figs. 1, 7, 15), where the power to the sub-CPU is shut down in which the turning off of the clock would be inherent.

Regarding **Claim 40**, Hamano discloses the method of Claim 27, wherein adjusting the system operating parameters comprises interrupting traffic on the computer system bus (see col. col. 14, lines 11-16; col. 19, lines 18-23; Figs. 7, 14, 15, 22), where the both computer unit (201) and sub-CPU (203) are halted.

Regarding **Claim 42**, Hamano discloses a machine-readable medium (e.g., memory) having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations (see col. 4, lines 33-50; Fig. 1) comprising:

receiving a radio active signal at a computer (2) having a CPU (2) from a coupled radio (3), the radio active signal indicating a start of reception of radio signals by the coupled radio (3) based on predicting a start time of an assigned channel which reads on the claimed "time slot" of a repeating frame assigned to the radio (3) (see col. 5, lines 13-19,23-31,55-56, 61-67; Figs. 1, 2 "ref. 2, 7", 3 "ref. 2"), where a communication processing request from the radio transmit-receive unit occurs in the portable electronic device in which the unit (3) is provided a channel;

adjusting system operating parameters of the computer (2) to reduce interference with the radio (3) (see col. 5, lines 13-19,32-47; Fig. 1);

receiving a radio not active signal at the computer (2) from the coupled radio (3), the radio not active signal indicating an end of reception of radio signals by the radio (3) based on predicting an end time of the time slot assigned to the radio (3) (see col. 5, lines 23-31;

col. 9, line 65 - col. 10, line 4; Fig. 2 "ref. 9"), where the control means (1) switches the sub-CPU (2) from rest to active; and

readjusting the system operating parameters of the computer for operation without regard to interference with the radio (3) (see col. 5, lines 23-27; col. 9, line 65 - col. 10, line 4), where the sub-CPU is released to active state. Hamano fails to disclose having the feature repeating TDMA frame assigned to the radio. However, the examiner maintains that the feature repeating TDMA frame assigned to the radio was well known in the art, as taught by Shimizu.

Shimizu further discloses the feature repeating TDMA frame assigned to the radio (see col. 3, lines 20-27; col. 2, lines 55-60; abstract; Figs. 1-2, 5A-B), where the mobile unit is provided an assigned TDMA slot that determines the start and end of communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Shimizu to have the feature repeating TDMA frame assigned to the radio, in order to provide a wireless communication terminal that can efficiently prevent noises against a wireless receiving section, as taught by Shimizu (see col. 1, lines 46-47).

Regarding **Claim 43**, the claim is rejected for the same reasons as set forth above in the rejection of claim 28.

Regarding **Claim 45**, the claim is rejected for the same reasons as set forth above in the rejection of claim 31.

Regarding **Claim 46**, the claim is rejected for the same reasons as set forth above in the rejection of claim 33.

Regarding **Claims 47** and **54**, the claims are rejected for the same reasons as set forth above in the rejection of claim 34.

Regarding **Claims 48** and **58**, the claims are rejected for the same reasons as set forth above in the rejection of claim 38.

Regarding **Claims 49** and **59**, the claim is rejected for the same reasons as set forth above in the rejection of claim 39.

Regarding **Claim 50**, Hamano discloses a computer (see Fig. 1) comprising:

a control line (9, 209) which reads on the claimed "I/0 bus" to receive a radio active signal and a radio not active signal from a coupled radio (3), the radio active signal indicating a start of reception of radio signals by the coupled radio based on predicting a start time of an assigned channel which reads on the claimed "time slot" of a repeating frame assigned to the radio (3) and the radio not active signal indicating an end of reception of radio signals by the radio (3) based on predicting an end time of the assigned channel which reads on the claimed "time slot" to the radio (3) (see col. 5, lines 13-19, 23-31, 55-56, 61-67; col. 9, lines 51-53; Figs. 1, 2 "ref. 2, 9", 7-8), where a communication processing request from the radio transmit-receive unit occurs in the portable electronic device for start of transmit-receive and the control means (1) switches the sub-CPU (2) from rest to active at the end; and

a CPU (2) coupled to the bus (9) to adjust system operating parameters of the computer to reduce interference with the radio (3) in response to the radio active signal (10) and to readjust the system operating parameters of the computer (2) for operation without regard to interference with the radio (3) in response to the radio not active (col. 5, lines 13-47,55-56; Figs. 1-3, 7-9). Hamano fails to disclose having the feature repeating TDMA frame assigned

to the radio. However, the examiner maintains that the feature repeating TDMA frame assigned to the radio was well known in the art, as taught by Shimizu.

Shimizu further discloses the feature repeating TDMA frame assigned to the radio (see col. 3, lines 20-27; col. 2, lines 55-60; abstract; Figs. 1-2, 5A-B), where the mobile unit is provided an assigned TDMA slot that determines the start and end of communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Shimizu to have the feature repeating TDMA frame assigned to the radio, in order to provide a wireless communication terminal that can efficiently prevent noises against a wireless receiving section, as taught by Shimizu (see col. 1, lines 46-47).

Regarding **Claim 51**, Hamano discloses the computer of Claim 50, further comprising a timing reference clock (4) to use in predicting a start time for reception by the radio in response to the radio active signal (see col. 4, lines 50-56; col. 5, lines 14-19,56-58,61-67; col. 9, lines 51-53; Figs. 2 "ref. 2, 7", 3 "ref. 2", 15).

Regarding **Claim 52**, Hamano discloses the computer of Claim 50, further comprising a connector coupled to the I/0 bus (9, 10) and wherein the I/O bus (9,) receives the radio active signal by detecting the assertion of a state on the connector (9, 10) (see col. 5, lines 14-16,55-56; col. 9, lines 52-53; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding **Claim 53**, Hamano discloses the computer of Claim 52, wherein the I/0 bus (9, 10) receives the radio not active signal by detecting the de-assertion of the state on the

connector (9, 10) (see col. 5, lines 23-27,55-56; col. 9, lines 51-53; col. 9, line 65 - col. 10, line 4; col. 10, lines 18-19; Figs. 1-3, 7-9), where the signal sent via the reset or control line.

Regarding **Claim 55**, Hamano discloses the computer of Claim 54, further comprising a power management module (6) coupled to the CPU (2) to receive an instruction from the CPU (2) to execute power management functions to reduce interference (see col. 5, lines 31-39; Figs. 1, 7, 15).

Regarding **Claim 56**, the claim is rejected for the same reasons as set forth above in the rejection of claim 36.

Regarding **Claim 57**, the claim is rejected for the same reasons as set forth above in the rejection of claim 37.

Regarding **Claim 60**, the claim is rejected for the same reasons as set forth above in the rejection of claim 40.

Claims 41 and **61** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hamano et al**. (hereinafter Hamano) (**US 5,604,928**) in view of **Shimizu (US 6,894,982 B1**) as applied to claims 27 and 50 above, and further in view of **Watanabe (US 6,542,726 B2)**.

Regarding **Claim 41**, Hamano discloses of adjusting the system operating parameters (see col. 4, lines 14-31), where the sub-CPU is adjusted between rest and active state. Hamano fails to disclose having the feature suspending operation of selected peripheral components of the computer. However, the examiner maintains that the feature suspending operation of selected peripheral components of the computer was well known in the art, as taught by Watanabe.

In the same field of endeavor, Watanabe discloses the feature suspending operation of selected peripheral circuit control unit (102) which reads on the claimed "peripheral components" of the CPU (101) which reads on the claimed "computer" (see col. 4, lines18-34; col. 5, lines 6-11, 60-64; col. 6, lines 1-34; Figs. 1-3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamano and Watanabe to have the feature suspending operation of selected peripheral components of the computer, in order to suppress noise during radio communication (see col. 3, lines 26-28,51-53), as taught by Watanabe.

Regarding **Claim 61**, the claim is rejected for the same reasons as set forth above in the rejection of claim 41.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 3-13, 15-28, 30-43, and 45-61 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-7907. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marsha D Banks-Harold

MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

WJD,JR
03 October 2005

Approved
10/03/2005

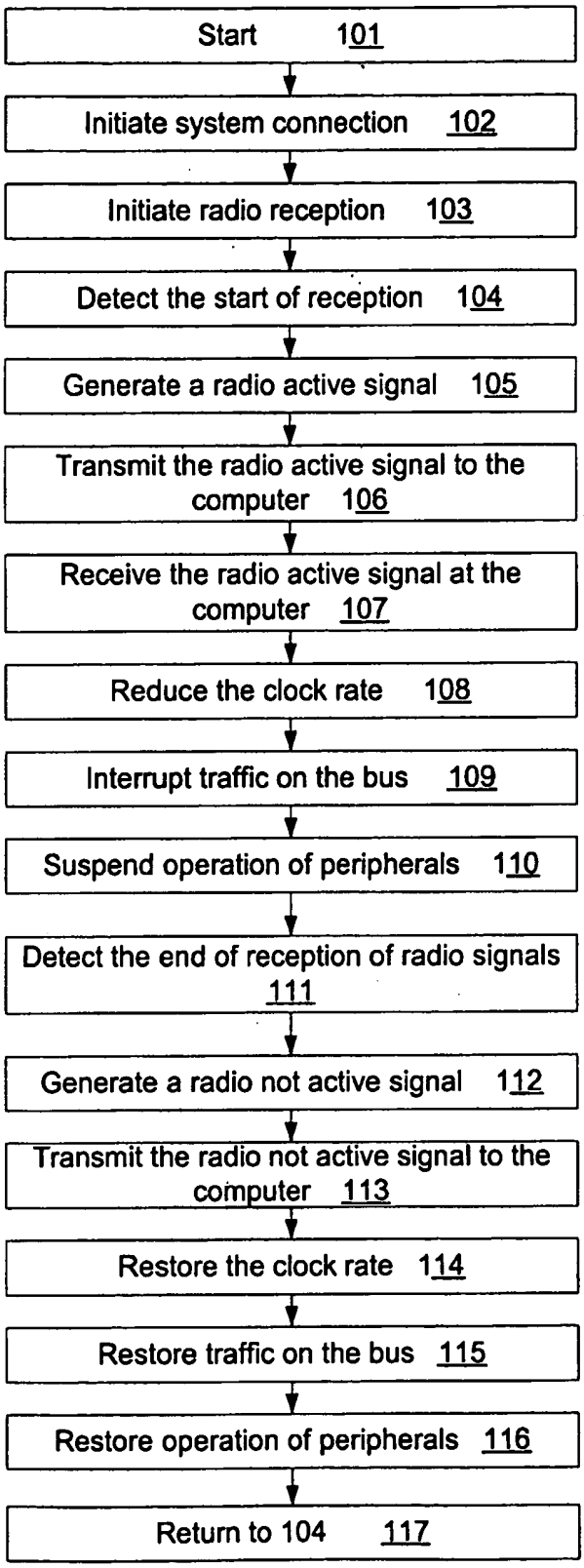

Figure 1

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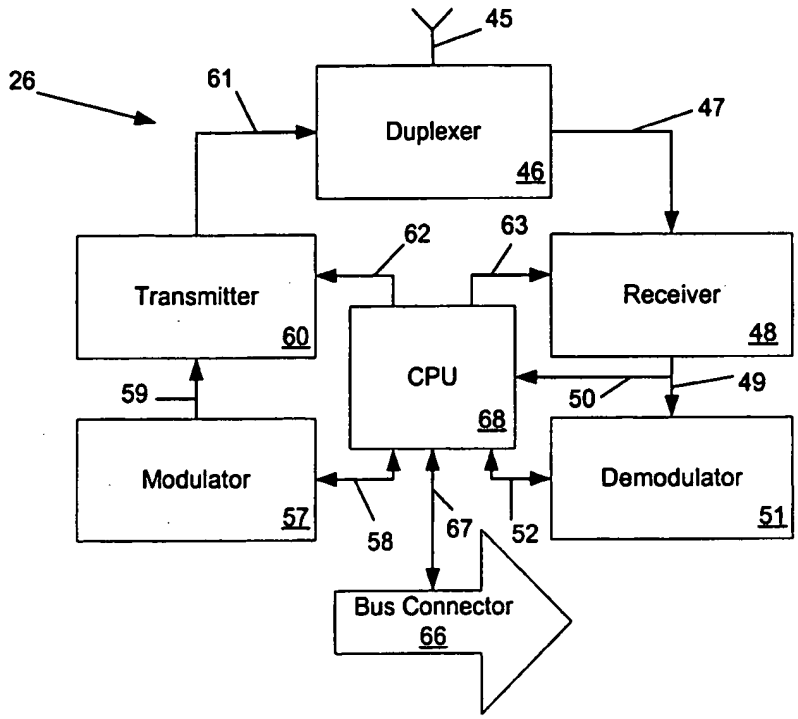

Fig. 2

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OJS 10/03/2005

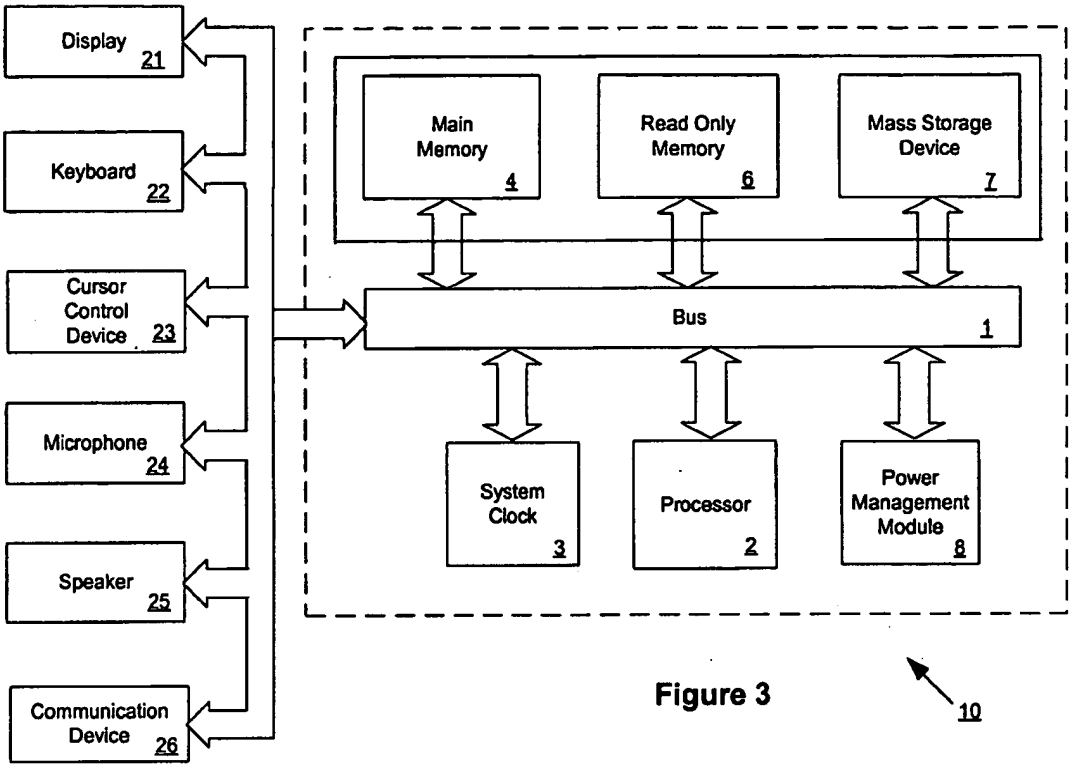

Figure 3